

CLAIMS

1. An apparatus for detecting the presence of a workpiece carrier in a predetermined track portion of a workpiece carrier transporting path, comprising a housing; a slider which is displaceably guided in said housing and is displaced by the workpiece carrier; at least one proximity switch which is releasable by said slider; two turning elements provided with teeth and arranged in said housing, each of said turning elements being supported turnably around an axis provided on said housing, said turning elements being in tooth engagement with one another, said turning elements being also in tooth engagement with linear tooth sets provided on opposite sides of the slider and extending in a linear displacement direction.

2. An apparatus as defined in claim 1, wherein at least one of said turning elements is formed as a turning lever which has two free ends each provided with a tooth set.

3. An apparatus as defined in claim 1, wherein said linear tooth set is formed in a wall of said slider, which extends in said housing.

4. An apparatus as defined in claim 1, wherein said proximity switch is a switch selected from the group consisting of an inductive proximity switch and pneumatic proximity switch.

5. An apparatus as defined in claim 4, wherein said housing is provided with a receptacle for said inductive proximity switch and also with a receptacle for said pneumatic proximity switch.

6. An apparatus as defined in claim 4, wherein said slider is provided with an actuating element for releasing said proximity switch.

7. An apparatus as defined in claim 6, wherein said actuating element is formed as a metallic actuating element.

8. An apparatus as defined in claim 7, wherein said actuating metallic element is formed as a metal plate.

9. An apparatus as defined in claim 1, wherein said slider has at least one lateral abutment incline which is inclined relative to said linear displacement direction at an angle substantially between 45° and 90° .

10. An apparatus as defined in claim 9, wherein said lateral abutment incline is inclined relative to said linear displacement direction at an angle of 25° .

11. An apparatus as defined in claim 1; and further comprising an element which is mounted on said slider and has at least one lateral abutment incline which is inclined relative to said linear displacement direction at an angle substantially between 45° and 90°.

12. An apparatus as defined in claim 11, wherein said lateral abutment incline is inclined relative to said linear displacement direction at an angle of 25°.

13. An apparatus as defined in claim 1, wherein said slider has an abutment surface which is arranged substantially orthogonal to said linear displacement direction.

14. An apparatus as defined in claim 1; and further comprising an element which is mounted on said slider and has an abutment surface arranged substantially orthogonal to said linear displacement direction.

15. An apparatus as defined in claim 1; and further comprising a restoring spring which pre-stresses said slider to an actuation ready position.